

WHAT IS CLAIMED IS:

1. A patch antenna apparatus characterized in that a patch electrode is provided on the top surface of a dielectric substrate disposed above a first ground-plane portion and is connected to current-feed means; the first ground-plane portion is arranged above a second ground-plane portion, which has a larger area than the first ground-plane portion, with a predetermined distance therebetween; and the first ground-plane portion is set so as to be excited by the second ground-plane portion at a frequency substantially equal to a frequency at which the patch electrode is excited when current is fed.

2. The patch antenna apparatus according to claim 1, wherein a conductive layer is provided on the top surface of a circuit board, which has a low-noise amplifier circuit at the bottom surface side thereof, so as to serve as the first ground-plane portion.